7 PARK MASTER PLAN PROGRAM

Introduction

The previous chapters have outlined the existing conditions of the natural and man-made environment, the recreational needs of the region, as well as the opportunities and constraints for Carvers Creek State Park. Developing a park program is the next step in creating guidelines for future development. The park program is a "toolbox" that is used when deciding the appropriate location for built park elements, such as the Visitor Center, historic properties, roads, trails, campgrounds, and picnic areas. It is important to note that the program for the park must serve the entire community – plants, animals and people. A balance must be found between the protection of natural resources and opportunities offered for recreation. Some ecologically sensitive areas of the park will be preserved for conservation management with limited public access, while previously developed areas are well suited for uses such as parking lots, roads, and campgrounds.

The three core elements of Carvers Creek State Park are natural resource protection, cultural and historic resource protection, and nature-based recreation. The park elements listed below address these in more detail.

Park Buildings

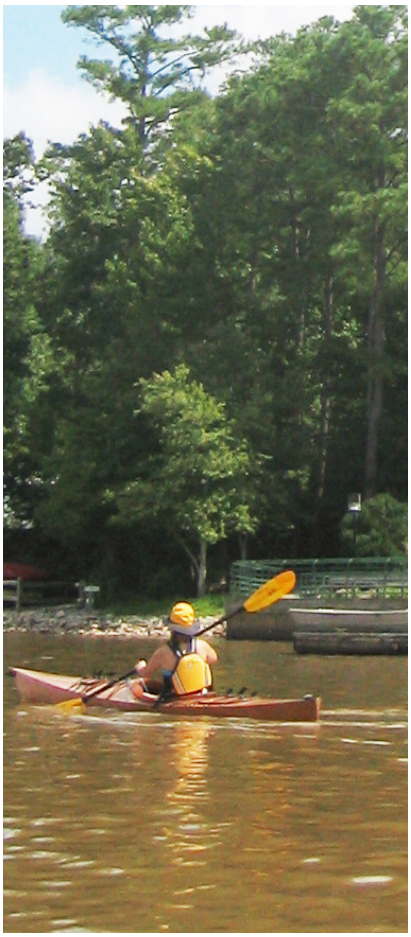
Historically Significant Areas at Long Valley Farm

Several important historic buildings exist within the state park and are integral in maintaining the "sense of place" of Long Valley Farm. Many buildings are listed on the National Register of Historic Places, and the entire farm is listed as well. These buildings serve the purpose of telling the story of the farm, the people who lived and worked there, including Robert Wall Christian, his role in scientific agriculture, and the Rockefeller family. Due to their cultural significance, the buildings should be preserved and utilized for cultural and historic educational interpretation, storage, picnic shelters, and artists-in-residence. School groups will enjoy learning about the history of the region. Any new construction in relation to these historic properties should be inspired by the vernacular architecture and craftsmanship. New buildings should blend in seamlessly with the historic structures, reflecting the details and mimicking the integrity of the surrounding buildings.

Visitor Center

The Visitor Center will be the starting point for educational and environmental programs that will focus on the entire state park. The building will be sited to reduce clearing and grading, as well as to provide natural daylighting, ventilation, and views. The building will feature environmentally sensitive or "green" architecture that will reinforce the environmental education programs at the park. Achieving Leadership in Energy & Environmental Design (LEED) certification is a goal of the North Carolina Division of Parks and Recreation.

The architecture of the building should be inspired by existing and typical Cumberland County farm buildings. Indoor spaces may include an exhibit hall, park offices, classrooms, educational exhibit areas, conference room, gift shop, concession, reception area, storage, and public restrooms. Proxim-



Canoe and kayak boat rentals

Typical park maintenance facility

ity to parking, activities and connections to trails and sidewalks is essential. There will be a drop off area for visitors. Outdoor pedestrian areas associated with the building include plazas and outdoor classrooms. Secure bicycle parking shall be provided near the building. Parking for vans and several buses will be needed. A variety of parking lot sizes can be used – smaller lots will have less impact on the sensitive site. Shade will also be provided.

Community Building

The opportunity for a community building in addition to the Visitor Center is a real possibility with the number of existing buildings found on the park properties. A community building would include community meeting space, rental space, and restrooms. The building would be a good place for travelling exhibits and events such as wildlife photography, guest speakers and acoustic music.

Visitor Contact Stations

Visitor Contact Stations will be located where staff is needed to greet park visitors when a Visitor Center is not appropriate. Visitor Contact Stations include space for offices and restrooms for park staff. Parking will be located here for two to five vehicles.

Ranger Residences

Ranger residences for park staff will be needed in the park, especially in locations where overnight camping will be provided. Ranger residences include all the conveniences of a typical family home, with bedrooms, kitchen and living areas, and restrooms. For privacy reasons, these homes should be located off a main park road, but not so far away that it is difficult for park staff to monitor park activities.

Boat Rental Facility

The preferred location of a boat rental facility is near a day-use area. The close proximity to the boat house will allow supervision by park staff. The facility will have as small of a footprint as possible. It is not anticipated that it will be used for long-term boat storage, as other buildings that exist on site might be used for that purpose. The materials used for the construction of the boat rental could even be reclaimed from buildings found on site that are not determined as repairable. Electricity and room for park staff to operate the rental operation is necessary. Only non-motorized boats will be allowed in the lake, such as kayaks and canoes. No vehicular access will be provided for visitors to launch their own boats; however, park users could launch canoes or kayaks from the shore if they carry their craft from their vehicle.

Park Maintenance Facility

Due to the large size of the existing park properties and the lack of connectivity, more than one maintenance facility will be needed for park operations. Opportunities to reuse existing buildings on site should be explored where possible. Maintenance facilities will be screened from public view and blend

with their surroundings as much as possible. Interior spaces include staff offices, a workshop, supply storage, shower, private restroom and break room. A maintenance yard is required for large equipment, deliveries, and storage of equipment and supplies. Parking will be provided for several park vehicles needed by the park staff.

Park Access and Roads

Where feasible, park access locations will be located at existing driveways in order to reduce clearing, grading and impacting environmentally sensitive areas. Internal park roads will be aligned with existing roads whenever possible. New roads will be designed with gentle curves to prevent excessive speed or the need for traffic calming measures. Roads will follow a pleasant progression through the park, with glimpses and views of the park facilities and natural features. The park layout must be easy to understand for first time visitors. The park design will not create crossing hazards for bicycles, equestrians, or pedestrians.

Parking

Parking will accommodate the necessary number of cars and buses in a variety of lots in close proximity to activity areas. Overflow parking in grass areas will be available for use during special events. Parking may be provided along roadways or in a series of smaller lots to prevent large expanses of asphalt. Parking lots will also need to accommodate the radius required for busses. Gravel parking is a cost-effective option, and can be planned for areas used less frequently. Parking lots will be sited sensitively in order to reduce potential environmental impacts caused by excessive clearing and grading. Parking lots will also be designed to promote shaded parking, and provide accessible spaces as required by code. The design of the parking lot will utilize effective stormwater management techniques such as rain gardens. Parking for equestrians will require longer parking stalls that can accommodate horse trailers.

Trailheads and Trails

The most important goals when approaching the design of trails are safety, accessibility, connectivity, adaptability, sustainability, and innovation. Where feasible, trails and sidewalks should be designed so they can be enjoyed by people of all ages and mobility levels using universal design methods. The maximum levels of connectivity to state, regional, and local trail systems will be offered where available.

The trail system should be flexible enough that users can experience the trail in many ways. For example, some users might not be able to walk the length of the trail, but smaller loops can be provided that begin and end at convenient access points. A loop reduces the need for backtracking and seeing the same scenery twice, and actually reduces wear and tear on the trail because people walk or bike around a loop once and not back and forth on a linear trail. Specific and easy to spot entry and exit points help users orient themselves in the trail system and are easier for staff to maintain.

Long Valley Farm roads

Shaded parking lot

The trail design should have a minimal impact on the environment and should avoid sensitive areas. Trail materials should be easy to install and maintain, easy to obtain locally, and appropriate to use in different environmental conditions. The innovative use of sustainable paving materials and the integration of stormwater and drainage elements reduce the development impact of the trail and also provide opportunities for educational interpretation. Attention to providing an enjoyable and aesthetically pleasing experience is also important. A meandering trail draws users through the park, offering periodic views of different park features.

Trail Guidelines and Accessibility

There are several authorities who have guidelines that relate to trail design and construction. The American Association of State Highway and Transportation Officials (AASHTO) sets standards and guidelines used in highway design and construction, as well as air, rail, water, public and pedestrian transportation. AASHTO has produced publications, such as the Guide for the Development of Bicycle Facilities and the Guide for the Planning, Design, and Operation of Pedestrian Facilities, which contains guidelines for bike transportation facilities and shared-use paths, sidewalks and street crossings, and pedestrian trails. The Manual of Uniform Traffic Control Devices (MUTCD) is a document which specifies the design standards of traffic signs, road surface markings, and traffic signals which is issued by the Federal Highway Administration (FHWA) of the United States Department of Transportation (USDOT). State and local agencies utilize the MUTCD to ensure shapes, colors, and fonts of all traffic control devices meet national standards.

To ensure access to trails for all people, including those with disabilities, Americans with Disabilities Association Accessibility Guidelines (ADAAG) exist to ensure safe travel and access for those with mobility impairments. The U.S. Forest Service has also developed accessibility guidelines which maximizes accessibility while protecting natural resources.

Planting

Planting design is a very important aspect that can greatly enhance the overall park experience. Plants can be used to screen unsightly views, buffer adjacent uses and environmentally sensitive areas, frame beautiful views, control sound, wind and erosion, attract wildlife and provide habitat, add seasonal color and texture, add visual interest, serve as wayfinding devices, and create “nodes” along trails that create natural gathering spaces or resting areas.

As much as possible, plant selection should utilize a mix of canopy, understory, shrubs, and grasses that are suitable for the location. Plants which are toxic for either people or animals should be avoided. A good resource for toxic plants for horses is the Ten Most Poisonous Plants for Horses (EQUUS June 2004). Native plants are recommended, and invasive species should always be avoided. In order to minimize maintenance, plants should be chosen that are adaptable to the local climate and soils to minimize pruning and the use of synthetic fertilizers and inorganic pest control. The design should also include drought tolerant plants in order to eliminate the need for irrigation.

Planting zones can be established that celebrate and highlight local native plant communities. These areas are great places for educational interpretation. Where plant communities already exist, additional planting should work within those types of communities and non-native or invasive species should be removed if possible.

Site Amenities

Site amenities will be the state park standard amenities, and placed appropriately at key rest areas and viewpoints. Site amenities should be vandal resistant and be easily accessible for all potential park users.

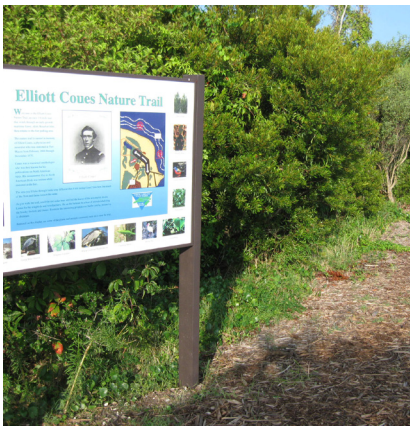
Benches, trash/recycling, dog waste stations, drinking fountains, bike racks, gates, and bollards should be placed appropriately where needed. Amenities should be chosen that are durable and practical, and represent a classic and timeless style so they can be used for an extended period of time. Benches should be placed in a variety of areas including sun, shade and under shelters. Bike racks should be located in visible areas at key destination points. “Farm” fencing could be considered to enhance the sense of place.

Informational kiosk designed to mimic rural architecture

Site lighting should be installed at a pedestrian scale and with safety in mind. Low voltage or solar powered lighting should be utilized when possible.

Signs and other wayfinding devices should function as a system and be designed for the first time user. All signage should be accessible to all park users, whether viewable, audible, or tactile. The signage should be designed with recognizable graphics and colors, with the information presented consistently and with a hierarchy. Signs should also take advantage of unique landmarks that make the park easier to navigate. Typical park signs should include directional signs, regulatory signs, stop signs, and crossing signs. All park signage will use the uniform state wide font. Several other signage types include:

- Rules and regulation signs including hours of operation, permitted uses, prohibited uses, wildlife protection policies, no trespassing, private property, pet policies, and no littering.
- Recreational signs such as distance markers and safety/informational signs.
- Multi-use trails should have signage directing trail usage such as bicycle speed, sight distances, horse startling, overtaking rules, and trail etiquette.
- ADA requires that signs need to be provided at trailheads and on newly constructed trails.



Interpretive sign panel at Fort Macon State Park

Interpretive signs can also serve to make the overall park experience more enjoyable. These types of signs contribute to and enhance the sense of place, and provide valuable site history and cultural context in an environmental and sustainable way. Interpretive signage can be provided through signs, art, paving, site amenities, Global Positioning Systems (GPS), downloadable podcasts and other technology.

Fishing Piers & Platforms

In order to prevent bank erosion, fishing will be accommodated on piers and platforms. These structures should be located in places that are already known as good fishing opportunities. A fixed pier system is preferred and a recycled/composite wood lumber is the preferred surface. At least one fishing area must be close to accessible parking and accessible routes to allow those with mobility impairments equal use. Care must be taken to site these elements sensitively within the park to reduce the impact on the natural environment.

Day-Use Areas

Day-Use Areas include shelters, picnic areas, restrooms, and are often the location of trail heads. Grills, tables, water, and a septic system will be provided. The picnic shelters can be utilized as amphitheaters or outdoor classrooms as well. School groups can use these areas during organized visits. An open play area sited near the day-use facility will allow visitors the opportunity for picnicking, flying kites, or playing catch or frisbee.

Park rules sign

Camping

Camping facilities will include tent and trailer, equestrian, and primitive camping. Tent and trailer camping will be configured in gated loops, with each loop accommodating at least 30 campsites. Campsites will be sited in order to provide the maximum amount of privacy while offering scenic views when possible. Equestrian camping will be configured in a single gated loop and will accommodate 15 campsites. Minimizing grading and preserving vegetation will also need to be evaluated when actual campsites are being planned. Electrical and water hookups at the campsites will be needed for some campers. Shower houses, sewage dumping stations, and waste/recycling areas will need to be placed for easy access while also considering noise and odor concerns. The location of septic fields will also need to be considered. Primitive camping will be located in secluded parts of the park with composting or pump and haul toilets. Group camping will include a small parking lot, restroom, and an open area for camping.


Boardwalk and overlook

Utilities

Water, electrical, and phone utilities exist currently in the park where residential homes and other buildings are located. All new utilities will be located underground. Septic fields will need to be located in appropriate areas for park facilities. Utility corridors will be coordinated with trails when possible to reduce the amount of clearing needed.

Storm Drainage

Storm drainage will include the design of permanent Best Management Practices (BMPs). Examples of BMPs include rain gardens, bioretention ponds, permeable pavement, and infiltration swales. Highlighting environmentally responsible stormwater management could be an educational opportunity for visitors to the park.

Ecologically Sensitive Areas

The ecologically sensitive areas in Carvers Creek State Park should be preserved and protected. Public access will be limited in these areas in order to protect important plant and animal species. Buffers will be provided around trees that are known Red-cockaded Woodpecker nesting cavities. In addition, other important plant and animal species have been documented with field work and Geographic Information Systems (GIS) as a tool for park planning in order to determine the best locations for conservation. Where possible, contiguous parcels of land should be sought to reduce fragmentation of the natural habitat. Trails and boardwalks may be carefully planned and built in these areas for environmental interpretation.

Shelter at trailhead, William B. Umstead State Park